

Selecting Appropriate Delivery Methods

“Media selection must be based on the learning context, the skills to be taught, the practicality of the situation, and what theory indicates would be appropriate.”

Dick and Carey (1996)

Blended learning is a very popular concept at the current time, and it's a concept that is easy to understand. However, implementing a blended learning solution requires that a number of decisions be made; the primary one being the delivery method appropriate for a particular piece of content. To make this decision, it is necessary to be familiar with the attributes of the various delivery methods as well as the characteristics of the content you have at hand and the audience you are reaching.

Delivery Methods

In general, training methods can be divided into two categories:

- Synchronous learning – A real-time, instructor-led online learning event in which all participants are available at the same time and can communicate directly with each other.
- Asynchronous learning – Learning in which interaction between leaders and students occurs intermittently with a time delay.

Below is a list (not exhaustive) of synchronous and asynchronous delivery methods with a brief description of each.

Physical classroom/ Instructor-led training	Usually refers to traditional classroom training in which an instructor teaches a class to a room of students. The term is used synonymously with onsite training and classroom training.
Virtual classroom	The online learning space where students and instructors interact.
Job aids	Paper documents (or the like) with the basic information that people can use as “cheat sheets”.
Books	Reference guides, user manuals, etc.
Self-training guides	Step-by-step print guide that teaches participants how to perform a particular task.
Web-Based Training (WBT)	Training content located on a Web server that participants can access using the Internet. Content can be interactive. No instructor is involved in the training.

Computer-Based Training (CBT)	An umbrella term for the use of computers in both instruction and management of the teaching and learning process. (Some people use the terms CBT and CAI interchangeably.)
Computer Aided Instruction (CAI)	The use of a computer as a medium of instruction for tutorial, drill and practice, simulation, or games.
Recordings	A video or video-type recording made of a physical or virtual classroom session.
Simulations	Highly interactive applications that allow the learner to model or role-play in a scenario. Simulations enable the learner to practice skills or behaviors in a risk-free environment.
Video/audio tape	Training via video or audiotape.
Audio conferencing	Voice-only connection of more than two sites using standard telephone lines.
Video conferencing	Using video and audio signals to link participants at different and remote locations
Chat	
Threaded Discussion	Online discussion area where participants can post or respond to notes placed online. Notes are grouped under applicable headings.
eMail	Using email as a form of threaded discussion.
Online discussion groups	A group of individuals using threaded discussion, chat, email, or the like to discuss a particular topic.
Discussion boards	On the Internet or the intranet, forums where users can post messages for other users to read.

Synchronous and Asynchronous Attributes

Attributes

Synchronous and asynchronous delivery methods have certain attributes.

For example, print or text such as job aids, reference materials, and self-training guides, are typically portable, self-paced, and (usually) inexpensive to produce. They are also, by their nature, static and give no opportunity for the reader to ask questions.

Other asynchronous media such as CBT/WBT, knowledge objects, simulations, video/audio, recordings, etc., may or may not be portable, but are self-paced. Often hardware (such as computers) is required to participate. A network connection may also be required. There is no direct opportunity for questions and the content is static because it must be produced ahead of time. Asynchronous media is typically expensive to produce, but may be designed to accommodate various learning styles.

Synchronous media, such as video and audio conferencing, virtual and physical classroom, and chat, involves live people, provides the opportunity for questions, can accommodate learning styles, and is often dynamic. There may be a price constraint. Hardware or logistics support may be required and there is a time constraint (everyone must be in the session at the same time, although not necessarily the same place). The leader determines the pace.

Reasons to use asynchronous media

You may choose to use asynchronous media because it:

- Allows time for reflection
- Allows participants to work at their own pace
- Can be highly structured

Reasons to use synchronous media

You may choose to use synchronous media because it:

- Provides immediate availability of the instructor for questions and feedback
- Provides many different types of tool
- Is similar to the classroom
- Can be set up just in time
- Allows for real-time collaboration among participants

Considerations in Selecting Media

When selecting media

When selecting media, the following considerations apply:

- Type of content
- Audience characteristics:
 - Learning styles
 - Constraints
- Cost and time to produce the content
- Available resources
- Materials that are currently available

Typically (but not always), asynchronous content is more costly and time-consuming to produce than synchronous. (This is not necessarily the case for print.) This cost may be lessened if you have in-house resources capable of asynchronous development. In addition, you can reduce the cost if you have content already available that could be used as part of a learning track.

Type of content

Content can be structured or unstructured. **Structured content** provides clear right and wrong answers. The participant's performance is observable and measurable. The way that the knowledge is applied varies little between cases.

Unstructured content, on the other hand, has no single right answer. The participant must apply knowledge to complex problems and this requires a combination of concepts, principles, and theories. The application of knowledge may vary greatly between cases.

Typically, asynchronous delivery methods are appropriate for structured content where you can anticipate questions that will be asked and identify branching that needs to take place.

Synchronous delivery methods are well suited for unstructured content, although they can be used for basically any kind of content.

Additional content considerations

When looking at content, you must also identify how immediate the need is. It is usually easier and quicker to create synchronous content than asynchronous content.

Another consideration is the lifespan of the content. If you spend time and money creating expensive asynchronous content and then find that the life span is only three months, you may not be using that time and money in the best manner.

Yet another consideration is the size of the audience. Once again, spending a lot of time and money creating content for a very small audience is not a good use of the time and money.

Synchronous content

Typically, synchronous content can be produced in less time and expense than asynchronous. It can be used for any content type but is particularly well suited for ill-structured content. Because it can be produced cheaply, it is appropriate for content having either a long or short lifespan and for large or small audience. Because it can be created quickly, it is especially useful where there is an immediate need.

Asynchronous content

Asynchronous content usually takes more time and resources than synchronous. Therefore, it is typically used where there is a large audience having the need and where the need is not immediate. In addition, it is particularly well suited to structured content where potential questions can be identified ahead of time.

To summarize

Although synchronous can certainly be used for most types of training, in some cases, asynchronous is a more efficient method of presenting the material (as in the case of job aids).

	Synchronous	Asynchronous
Unstructured content	Y	N
Structured content	Y	Y
Short lifespan	Y	N
Long lifespan	Y	Y
Large audience	Y	Y
Small audience	Y	N
Immediate need	Y	N
Not immediate need	Y	Y

In the above table, we are looking *only* at the type of content, the lifespan, and the size of the audience. Additional considerations may alter your decision.

**Additional considerations:
Learning styles**

You also need to take audience characteristics into consideration when identifying the delivery method.

An audience learning style includes whether they typically lean toward an interpersonal learning style or an intrapersonal learning style. Also, what is their level of comfort in the classroom? Certain groups of people are very uncomfortable in a formal classroom. On the other hand, others may be very uncomfortable using technology of any kind.

**Additional
considerations:
Constraints**

Audiences may have certain constraints that preclude using a particular delivery method. For example, if you choose video conferencing, obviously, all participants must have access to the videoconference facility. Additional questions you may want to ask include:

- Do participants have Internet access?
- Is specialized equipment, etc. available? This specialized equipment may only be available in a standard classroom.
- What is the noise level of the environment? Some areas make it impossible to hear a CBT or to participate in a virtual classroom. Is there another area where the participant can go?
- Is there a distribution issue? If it is currently difficult to distribute materials, it will also be difficult to distribute materials such as CBT or print materials.
- Is training seen as an opportunity to get together? In other words, do participants see the physical classroom as a way to get to know people, or does the organization see it as a way to motivate a team?

Use a list such as the one that follows to identify criteria within your organization.

		Synchronous	Asynchronous
Audience	It is very difficult to get the audience away from their jobs for a scheduled activity		✓
	The audience prefers to learn at their own pace without discussion or instructor feedback		✓
	The audience prefers to learn within the context of a larger group of people, learning from what others do and say	✓	
	It is difficult or expensive for the audience to travel to the classroom.	✓	
Content	The content is straight-forward with little chance of confusion		✓
	The content often requires clarification	✓	
	There are typically a lot of questions asked by the audience	✓	
	It is important that the content is up to date and delivered quickly to the target audience	✓	
	The content requires interaction among participants (such as role playing, etc.)	✓	
	The content already exists for a standup classroom environment		✓
	The content is primarily task based	✓	
	The content requires discussion and individual work on deliverables, but does not require face-to-face interaction.		✓
	It is important that the content be delivered consistently with the same key points emphasized each time, the same key activities, etc.		✓

Once you have decided on synchronous or asynchronous as the delivery method for a particular module, then you must also decide on which of the many types within that category would be appropriate. In this respect, there is often not a right or wrong answer.

**Considerations
if you chose
synchronous**

If you have chosen to use synchronous for a particular module, will it be physical or virtual? You can decide by answering the following questions:

- Is travel easy and affordable?
- Is time away from work acceptable?
- Is a special classroom setup necessary?
- Are there specific reasons to get people together physically?

**Considerations
if you chose
asynchronous**

Likewise, if you have chosen an asynchronous delivery method, will it be CBT, WBT, video, audio, print? In this situation, you need to answer the following questions:

- Do you have the time necessary to produce the content?
- Can you afford the price?
- Do you have the resources necessary in-house or will you need to contract it out?
- Is special equipment needed to take the training?

Typically, WBT allows you to keep your development and distribution costs lower than CBT. It also allows you to update, revise, and implement courseware as quickly as possible because it exists on the Web.

CBT, on the other hand, provides maximum accessibility as a resource or reference because you do not need to be connected to the Web in order to use it. It also provides a higher video and audio quality and responsiveness and usually can provide you with a higher level of interactive techniques for exercise, but not as effective distribution as the Web.

Once you have selected the delivery method based on the considerations we have discussed, the next step is to go into the design and development phase. A further consideration is to identify a method to blend the training. Some organizations have found a Learning Management System to be useful in order for the user to access the sequenced training path and its content in one place.

**Suggested
References**

Web-Based Training, Margaret Driscoll, 1998, Jossey-Bass Pfeiffer, ISBN 0-7879-4203-0

Web-Based Training Cookbook, Brandon Hall, 1997, John Wiley and Sons, Inc., ISBN 0-471-18021-1

Online resources:

Influential Trends – www.influent.com -- e-newsletter

Online Learning news – weekly

- Lakewood1@list.email.pub.com (Subject=subscribe)
- www.lakewoodconferences.com and click “Free Online Newsletters”

Masie Center – www.masie.com

Online learning – www.ittrain.com

There are also other list servers that can send you current events in the distance learning area.